



INSTITUTE OF PLANT GENETICS POLISH ACADEMY OF SCIENCES

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**Recruitment for the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences
at the Institute of Plant Genetics, PAS in Poznan
Procedure no. 8/2025/IGR/PSD**

INSTITUTION: Institute of Plant Genetics, Polish Academy of Sciences
CITY: Poznan
POSITION: PhD student
POSITIONS AVAILABLE: 1
SCIENTIFIC DISCIPLINE: agricultural sciences
PUBLICATION DATE: 27.03.2025
APPLICATION DEADLINE: 28.04.2025
IPG PAS WEBSITE: <https://www.igr.poznan.pl/en>
PDS IPAS WEBSITE: <http://www.psd-ipan.ibch.poznan.pl/index-en.html>

KEYWORDS: genetics, genomics, bioinformatics, genotyping, phenotyping, quantitative trait loci mapping, gene expression, flowering time regulation, vernalization, photoperiod, lupin.

Research topic: The main goal of this project is to identify the key genes that control flowering in response to different environmental cues in three wild species of Old World lupins: *Lupinus cosentinii* Guss., *L. hispanicus* Boiss. et Reut., and *L. pilosus* Murr. To do this, we will breed accessions with different responses to the photoperiod (length of daylight) and vernalization responsiveness (period of low temperature) to create new genetic populations. These will then be studied to determine which genes are responsible for the observed differences. We will also look at the parts of the genes that control their activity to see if changes affect how they work and the plant's characteristics. This study aims to help us better understand how plants regulate flowering induction and how they adapt to different environments.

Principal Investigator: dr Wojciech Bielski

DESCRIPTION:

Place of employment: Department of Gene Structure and Function, Institute of Plant Genetics, Polish Academy of Sciences

Supervisor: dr. hab. Michał Książkiewicz, **co-supervisor:** dr Wojciech Bielski

Goal of employment: implementation of the project OPUS 27 no. 2024/53/B/NZ9/02200

Scope of research: The doctoral thesis will focus on verifying the hypothesis of a multigenic (polygenic) mechanism for flowering induction in response to vernalization in *L. cosentinii* and *L. pilosus*, and an oligogenic regulation in *L. hispanicus*. To achieve this, we will conduct both phenotypic observations of the flowering phases in the studied individuals from the developed recombinant inbred lines (RILs) and molecular analyses. This will include collecting plant material for whole-genome DNA sequencing and genotyping using DART-seq and RAD-seq techniques. The results obtained will enable the construction of species-specific genetic maps. Combining these maps with sequencing data will allow

for the identification of genes involved in flowering induction in the studied lupin species in response to vernalization.

Duties in the project: Engaging in scientific research on plant materials in accordance with the established plan in collaboration with colleagues within the Department, including the development and interpretation of the results. Moreover, the PhD candidate will participate in the preparation of scientific publications and conference presentations, as well as contribute to the ongoing research initiatives conducted within the Department.

Requirements for the candidates:

1. Master's degree in Biology, Biotechnology, or in related fields
2. Laboratory experience in the field of molecular biology, in particular PCR, DNA, and RNA isolation.
3. Preferred experience in bioinformatics, knowledge of basic tools for sequence analysis and publicly available genebanks.
4. Basic knowledge of genetics, including an understanding of genetic mapping and QTL mapping.
5. Basic knowledge of gene expression regulation in eukaryotic organisms.
6. Knowledge of molecular control of flowering induction in plants.
7. Ability to use MS Office software, including Word and Excel.
8. At least good knowledge of spoken and written English.
9. Independence in performing experiments and teamwork skills.
10. Candidates who are citizens of countries outside the European Union must provide current documentation verifying their right to reside in Poland.
11. Readiness to start research no later than one month after the publication of recruitment results.
12. Knowledge of R/Python or related programming languages is welcome.
13. Additional scientific activity (publications, conference communications, and other forms of presenting results, participation in projects, scientific groups, etc.) and organizational activity (e.g., organizing workshops, training, and conferences) are welcome.

Additional information:

1. Research and doctoral theses shall be carried out within the OPUS 27 project no. 2024/53/B/NZ9/02200, entitled "Genes conferring photoperiod neutrality and vernalization independence in wild lupin species", funded by National Science Centre, Poland.
2. The PhD student will receive a scholarship in the amount of PLN 4270,00 gross/PLN 3700,00 net, for a period of 24 months. After a positive mid-term evaluation, the PhD scholarship will increase to PLN 5340,90 gross/PLN 4739,00 net for a period of 24 months.
3. PhD students shall be subject to social insurance, pursuant to the article. 6 section 1 passage 7b of the act of October 13th, 1998, on the social insurance system (Journal of Laws of 2019, items 300, 303, and 730).

Required documents:

1. Application for admission to PDS IPAS along with the consent for processing personal data upon the recruitment procedure and a statement on having acknowledged the regulations of recruitment for PDS IPAS, using form downloaded from <https://www.igr.poznan.pl/en/main-ids-konkursy-oferty-do-psd-ipan>
2. Certified copy of the diploma confirming graduation or a certificate confirming graduation (in the case of diplomas issued by foreign higher education schools, diploma stipulated in article 326, section 2, passage 2 or article 327, passage 2 of the act of July 20th, 2018 – Law on Higher Education and Science (Journal of Laws of 2018, item 1668, as amended), entitling to apply for conferment of a doctoral degree in the state in where such a certificate was issued by the relevant higher education school. In the event when the candidate is not in possession of the aforementioned documents, he/she is obliged to submit them prior to admission to PDS IPAS. Additional information on foreign school diplomas are available at: <https://nawa.gov.pl/en/recognition/recognition-for-academic-purposes/applying-for-admission-to-doctoral-studies>

ATTENTION: at the stage of the recruitment process, there is no requirement to present documents certified by the apostille clause nor the requirement of nostrification of diplomas. These requirements must be met if the candidate is accepted.

3. Scientific CV encompassing track record of previous education and employment, information on involvement in scientific activities (participation in student research groups, attendance at scientific conferences, accomplished internships and training, awarded prizes and distinction), and list of publications.
4. Cover letter featuring a short description of research interests, achievements, and justification for the intention to commence education at the doctoral school.
5. Certificates or other documents confirming the degree of proficiency in English, if the candidate is in possession of such materials.
6. Contact details of at least one, previous scientific supervisor or another researcher who is entitled to issue an opinion on the candidate.

Documents in the electronic form (in 1 pdf file) must be sent by e-mail to psd@igr.poznan.pl with the following title: **PhD student – Gene Structure and Function Team**, supplemented by the **number of the procedure: 8/2025/IGR/PSD**.

The submission deadline is 28.04.2025

Criteria for evaluation of candidates:

1. Candidate's research achievements, pursuant to the grades obtained in the course of studies, scientific publications, awarded scholarships and distinctions resulting from conducting scientific research or student activities or other achievements.
2. Candidate's scientific and professional experience, pursuant to participation in conferences, workshops, training sessions, and internships, implementation of research and commercial projects, involvement in scientific trusts and societies, international and professional mobility, and experience in other sectors, including industry.
3. Candidate's knowledge of the following disciplines: horticulture and agriculture, agriculture sciences.
4. Knowledge of the subject matter described in the recruitment advertisement.

The description of the recruitment process is stipulated in the Regulations of Recruitment for PDS IPAS. Following the recruitment procedure, the unadmitted candidates shall be informed on the number of points obtained at both stages.

For additional information, please contact:

Principal Investigator: dr Wojciech Bielski

e-mail: wbie@igr.poznan.pl

Announcement of the results: Within one month from the deadline for applications.

Information clause:

Pursuant to Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter General Data Protection Regulation - GDPR), the Employer informs that:

- a) the administrator of personal data obtained, collected and processed as a part of the implementation of this agreement is the Institute of Plant Genetics, Polish Academy of Sciences, 34 Strzeszyńska str., 60-479 Poznań,
- b) contact with the inspector of personal data protection of the Institute of Plant Genetics, Polish Academy of Sciences in Poznan, is possible at the following e-mail address: iodo@igr.poznan.pl,
- c) the basis for data processing is art. 6 par. 1 letter b) and c) of the Regulation referred to above,
- d) all personal data provided to the Employer will be kept for the duration of the contract and for a period of 5 years after its completion,
- e) in relation to the personal data obtained, the Employer will not make decisions in an automated manner,
- f) The Employee is entitled to:
 - based on Article. 15 GDPR - access to personal data
 - based on Article. 16 GDPR - rectify personal data;
 - based on Article. 18 GDPR - request the administrator to restrict the processing of personal data, except to the cases referred to in art. 18 para. 2 GDPR;
 - the right to file a complaint to the President of the Office for Personal Data Protection, if the Employee considers that the processing of personal data by the Employer violates the provisions of the GDPR.